

DETAILED ACTION

1. This is in response to the terminal disclaimer filed on 27 April 2006.
2. Claims 1-52 are pending in the application.
3. Claims 1-52 have been allowed.

Terminal Disclaimer

4. The terminal disclaimer filed on 27 April 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,636,689 B1 has been reviewed and is accepted. The terminal disclaimer has been recorded.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Irah Donner on 4 August 2009.

The application has been amended as follows:

Claim 11. (Currently Amended) ~~In a method A data disc~~ for authenticating at least one of ~~a media said data disc~~ and data stored on said ~~media data disc~~, in order to prevent at least one of piracy, unauthorized access and unauthorized copying of the data stored on said ~~media data disc~~, [[a]] the data disc comprising ~~media containing~~ at least one modified modulation rule comprising at least one authentication key or component thereof for authenticating at least one of said ~~media data disc~~ and said data, wherein said at least one of said ~~media data disc~~ and said data

may be outputted in at least one of an analog and audio form substantially error free and free of said at least one modified modulation rule by at least one of an error removal process and said at least one authentication key or component thereof, thereby allowing a user to experience said media data without experiencing said modulation rules removed therefrom via said error removal process.

Claim 13. (Currently Amended) ~~In a method A data storing device for authenticating at least one of a media said data storing device and data to be stored on said media data storing device, in order to prevent at least one of piracy, unauthorized access and unauthorized copying of the data stored on said media data storing device, [[a]] the data message storing device comprising modulation via at least one modified modulation rule to generate at least one authentication key or component thereof for authenticating at least one of said data storing device and said data message, and wherein the modified modulation rule cannot be readily altered, obscured nor removed from said data message without simultaneously degrading or impairing a quality of an audible component of said data message, and wherein the data message is transmitted substantially free of the modified modulation rule thereby preventing a destination processor from reading and subsequently authenticating said data message.~~

Claim 25. (Currently Amended) The data disc of claim 11, wherein said at least one modified modulation rule is located on at least one of a per track basis and interval basis throughout said media data disc such that authenticating is performed for at least one of each track to be played throughout playback and throughout recording.

Claim 38. (Currently Amended) The data message storing device of claim 13, wherein said at least one modified modulation rule is located on at least one of a per track basis and

interval basis throughout said ~~media~~-data storing device such that authenticating is performed for at least one of each track to be played throughout playback and throughout recording.

Claim 39. (Currently Amended) The data ~~message~~ storing device of claim 13, wherein authentication occurs using a different authentication key or component thereof for each disc track.

Claim 40. (Currently Amended) The data ~~message~~ storing device of claim 13, wherein authentication occurs using at least two different authentication key, each of which must be successively authenticated before said data is output.

Claim 41. (Currently Amended) The data ~~message~~ storing device of claim 13, wherein authentication occurs using at least three different sources for compiling compound authentication keys.

Claim 42. (Currently Amended) The data ~~message~~ storing device of claim 13, wherein authentication occurs via decoding or decrypting the embedded authentication key or component thereof for subsequent authentication.

Allowable Subject Matter

6. Claims 1-52 are allowed.

The following is an examiner's statement of reasons for allowance:

The current application is directed to a technique for authenticating data and/or a data medium in order to prevent unauthorized copying. More particularly, the current application makes use of one or more authentication keys generated using a look-up table which intentionally interferes with or alters normal output data to produce otherwise incorrect data (page 55-56). After being generated, these keys are embedded and hidden within data stored on

the medium. In use, the authentication keys are identifiable by modulating the data through use of the look-up table (see, e.g., page 50). Subsequently, the keys may be used to remove modulation from the medium or, in other words, produce modulation-free or deciphered data from the medium (page 61). As such, data and/or a medium may be verified as being a legitimate copy by locating and identifying an authentication key, which may then be used to produce audio, sensible and/or usable output. This feature (as well as other independent and optional features of the present invention) is important because without removal of the modulation of the modified modulation rule the data would not be suitable for use. Without conceding that the prior art shows or suggests any of the features of the present invention, each of the independent claims specifically recites a combination of elements including "outputting said data as at least one of audio, video, audio data, video data and digital data substantially free of the modulation of the at least one modified modulation rule" (e.g., independent claims 1, 12, 13 and 16) or "wherein said at least one of said media and said data may be outputted in an analog and/or audio form substantially error free and free of said at least one modified modulation rule by at least one of an error removal process and said at least one authentication key or component thereof" (e.g., independent claims 11, 14, and 15).

The closest prior art was the Preuss U.S. Patent No. 5,319,735 in the combination of Sollish EP 0745925. However, in contrast, Preuss discloses a technique for embedding a code signal into an audio signal to form a composite signal in a manner such that the code signal is not, for example, substantially removable from the composite signal. In particular, in Preuss, identification information describing, for example, the artist or the title of a musical selection (col. 3, line 62), is embodied by a code signal. This code signal, in turn, is embedded into an

audio signal (e.g., the music or data) to form the composite signal (col. 4, line 38-41). During playback, the code signal is output with the audio signal in a manner such that it is not discernible from the audio (col. 3, lines 23-24). To keep the identification information with its associated audio data, the code is not separable from the audio signal (col. 4, lines 47-50). To allow the code signal to be removed or removable from the audio signal would defeat the purpose of the Preuss invention. Furthermore, in Preuss, the step of detecting the code signal rendered obvious the step of detecting the modulation of the at least one modified modulation rule of the present invention. However, the code signal of Preuss is not modulation or a modified modulation rule. As discussed above, the code signal of Preuss describes identification information, such as, for example, an artist's name or the title of a musical selection. As a result, it should be clear that detecting a code signal is not analogous to detecting the modulation of the at least one modified modulation rule. Thus, without conceding that Preuss discloses or teaches any of the elements of the present invention, it is clear that Preuss does not show or suggest the combination, including "outputting said data as at least one of audio, video, audio data, video data and digital data substantially free of the modulation of the at least one modified modulation rule".

Any claims not directly addressed are allowed on the virtue of their dependency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARAVIND K. MOORTHY whose telephone number is (571)272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aravind K Moorthy/
Examiner, Art Unit 2431

/William R. Korzuch/
Supervisory Patent Examiner, Art Unit 2431